

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

AMENDED 9/15/94

Date of Report: September 13, 1994

Date Received: September 9, 1994

Project: 7238, Effluent Heavy Mtls., PO #M 36168

Date Samples Extracted: September 9, 1994

Date Extracts Analyzed: September 9, 1994

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

**Samples Processed Using Method 3005
Results Reported as mg/L (ppm)**

<u>Sample ID</u>	<u>M 36168</u>
Analyte:	
Arsenic	0.33
Cadmium	<0.05
Chromium	1.9
Lead	0.10
Silver	<0.05
Nickel	12
Zinc	1.4
Copper	6.0
Iron	8.1

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Quality Assurance

<u>Sample ID</u> <u>Analyte:</u>	<u>Blank</u>	<u>M 36168</u> <u>(Duplicate)</u>
Arsenic	<0.06	0.15
Cadmium	<0.05	<0.05
Chromium	<0.05	1.9
Lead	<0.05	<0.05
Silver	<0.05	<0.05
Nickel	<0.05	11
Zinc	<0.05	1.3
Copper	<0.05	6.0
Iron	<0.05	8.6

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**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
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INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Samples Processed Using Method 3005**Results Reported as % Recovery****Quality Assurance**

<u>Sample ID</u>	<u>M 36168 Matrix Spike % Recovery</u>	<u>M 36168 Matrix Spike Duplicate % Recovery</u>	<u>Spike Level</u>
Analyte:			
Arsenic	100%	98%	10
Cadmium	83%	90%	5
Chromium	93%	92%	5
Lead	86%	86%	10
Silver	105%	101%	2
Nickel	74%	79%	10
Zinc	91%	89%	5
Copper	96%	90%	10
Iron	70%	99%	10

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**Samples Processed Using Method 3005
Results Reported as % Recovery
Quality Assurance**

<u>Sample ID</u>	<u>Spike Blank</u> <u>% Recovery</u>	<u>Spike</u> <u>Level</u>
Analyte:		
Arsenic	99%	10
Cadmium	87%	5
Chromium	95%	5
Lead	94%	10
Silver	101%	2
Nickel	88%	10
Zinc	87%	5
Copper	96%	10
Iron	85%	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3012 16th Avenue West
Seattle, WA 98119-2029
FAX: (206) 283-5044

DUPLICATE COPY

September 13, 1994

INVOICE #94ACU0913-1

**Alaskan Copper Works
628 South Hanford
Seattle, WA 98134**

**RE: Project 7238, Effluent Heavy Mtls., PO #M 36168: Results of testing
requested by Gerald Thompson, Project Leader for material submitted on
September 9, 1994.**

1 water sample analyzed for Total Metals by Method 6010 @ \$115 per sample	\$ 115.00
1 water sample analyzed for pH @ \$10 per sample	<u>10.00</u>
Amount Due	\$ 125.00

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Seattle, WA 98119-2029
FAX: (206) 283-5044

September 15, 1994

**Gerald Thompson, Project Leader
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134**

Dear Mr. Thompson:

Enclosed are the amended results from the testing of material submitted on September 9, 1994 from Project 7238, Effluent Heavy Mtls., PO #M 36168. The report has been amended to include the results for copper and iron.

We are sorry for any inconvenience this may have caused you and hope you will call if you should have any questions.

Sincerely,



**Bradley T. Benson
Chemist**

BTB/dp

Enclosures